

Appl. No. 10/750,755  
Amendment dated: June 4, 2007  
Reply to OA of: November 1, 2006

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1(currently amended). A medical device made of a biocompatible titanium alloy composition having an improved castability consisting essentially of:

- (a) about ~~0.01-5~~ 0.1-5 wt% Bi based on the weight of the alloy composition;
- (b) at least one alloy element selected from the group consisting of Mo, Nb, Ta, Zr and Hf; and
- (c) the balance Ti, said alloy does not contain an intentionally added element selected from the Pt group.

2(original). The medical device as set forth in claim 1, wherein said alloy composition comprises 0.1-3 wt% Bi.

3(currently amended). A medical device made of a biocompatible titanium alloy composition having an improved castability consisting essentially of:

- (a) about ~~0.01-5~~ 0.1-5 wt% Bi based on the weight of the alloy composition;
- (b) at least one alloy element selected from the group consisting of Mo, Nb, Ta, Zr and Hf;
- (c) at least one eutectoid beta stabilizing element selected from the group consisting of Fe, Cr, Mn, Co, Ni, Cu, ~~Ag, Au, Pd~~, Si, and Sn; and
- (d) the balance Ti, said alloy does not contain an intentionally added element selected from the Pt group.

4(canceled).

5(canceled).

Appl. No. 10/750,755  
Amendment dated: June 4, 2007  
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6(currently amended). The medical device as set forth in claim 2, wherein the titanium alloy composition consists essentially of Ti and Mo; Ti and Nb; Ti and Zr; ~~Ti, Mo and Fe; Ti, Mo and Cr; Ti, Mo and Nb; Ti, Mo and Ta; Ti, Nb and Fe; Ti, Ta and Fe;~~ or Ti, Nb and Zr; Ti, Al and Nb; Ti, Mo, Zr and Fe; or Ti, Mo, Hf and Fe, in addition to Bi.

7(original). The medical device as set forth in claim 1 which is a dental casting.

8(original). The medical device as set forth in claim 1 which is a medical implant.

9(currently amended). A method for improving a castability of a titanium alloy consisting essentially of at least one alloy element selected from the group consisting of Mo, Nb, Ta, Zr and Hf, said method comprising introducing about ~~0.01-5~~ 0.1-5 Bi into said titanium alloy, based on the weight of Bi and said titanium alloy, said alloy does not contain an intentionally added element selected from the Pt group.

10(original). The method as set forth in claim 9, wherein 0.1-3 wt% Bi is introduced into said titanium alloy.

11(currently amended). A method for improving a castability of a titanium alloy consisting essentially of at least one alloy element selected from the group consisting of Mo, Nb, Ta, Zr and Hf and at least one eutectoid beta stabilizing element selected from the group consisting of Fe, Cr, Mn, Co, Ni, Cu, ~~Ag, Au, Pd,~~ Si and Sn, said method comprising introducing about 0.01-5% Bi into said titanium alloy, based on the weight of Bi and said titanium alloy, said alloy does not contain an intentionally added element selected from the Pt group.

12(canceled).

13(canceled).

14(original). The method as set forth in claim 10, wherein said titanium alloy consists essentially of Ti and Mo; Ti and Nb; Ti and Zr; Ti, Mo and Fe; Ti, Mo and Cr; Ti, Mo and Nb; Ti, Mo and Ta; Ti, Nb and Fe; Ti, Ta and Fe; Ti, Nb and Zr; Ti, Al and Nb; Ti, Mo, Zr and Fe; or Ti, Mo, Hf and Fe.

15(currently amended). A method of using a titanium alloy composition in making a medical device comprising casting a titanium alloy composition consisting essentially of

- (a) about ~~0.01-5~~ 0.1-5 wt% Bi based on the weight of the alloy composition;
- (b) at least one alloy element selected from the group consisting of Mo, Nb, Ta, Zr and Hf; and
- (c) the balance Ti, said alloy does not contain an intentionally added element selected from the Pt group.

16(original). The method as set forth in claim 15, wherein said alloy composition comprises 0.1-3 wt% Bi.

17(currently amended). A method of using a titanium alloy composition in making a medical device comprising casting a titanium alloy composition consisting essentially of

- (a) about ~~0.01-5~~ 0.1-5 wt% Bi based on the weight of the alloy composition;
- (b) at least one alloy element selected from the group consisting of Mo, Nb, Ta, Zr and Hf;
- (c) at least one eutectoid beta stabilizing element selected from the group consisting of Fe, Cr, Mn, Co, Ni, Cu, ~~Ag, Au, Pd~~, Si and Sn; and
- (~~e~~) (d) the balance Ti, said alloy does not contain an intentionally added element selected from the Pt group.

18(canceled).

19(canceled).

20(currently amended). The method as set forth in claim 16, wherein the titanium alloy composition consists essentially of Ti and Mo; Ti and Nb; Ti and Zr; ~~Ti, Mo and Fe; Ti, Mo and Cr; Ti, Mo and Nb; Ti, Mo and Ta; Ti, Nb and Fe; Ti, Ta and Fe;~~ or Ti, Nb and Zr; ~~Ti, Al and Nb; Ti, Mo, Zr and Fe; or Ti, Mo, Hf and Fe;~~ in addition to Bi.

21(original). The method as set forth in claim 15, wherein said medical device is a dental casting.

22(original). The method as set forth in claim 15, wherein said medical device is a medical implant.

23(previously presented). The medical device as set forth in claim 3, wherein the titanium alloy composition consists essentially of Ti, Mo and Fe; Ti, Mo and Cr; Ti, Nb and Fe; Ti, Ta and Fe; Ti, Mo, Zr and Fe; or Ti, Mo, Hf and Fe; in addition to Bi.

24(previously presented). The medical device as set forth in claim 17, wherein the titanium alloy composition consists essentially of Ti, Mo and Fe; Ti, Mo and Cr; Ti, Nb and Fe; Ti Ta and Fe; Ti, Mo, Zr and Fe; or Ti Mo, Hf and Re; in addition to Bi.

25(new). The medical device as set forth in claim 3, wherein the titanium alloy composition consists of Ti, Mo and Fe; Ti, Mo and Cr; Ti, Nb and Fe; Ti, Ta and Fe; Ti, Mo, Zr and Fe; or Ti, Mo, Hf and Fe; in addition to Bi.

Appl. No. 10/750,755  
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26(new). The medical device as set forth in claim 17, wherein the titanium alloy composition consists of Ti, Mo and Fe; Ti, Mo and Cr; Ti, Nb and Fe; Ti Ta and Fe; Ti, Mo, Zr and Fe; or Ti Mo, Hf and Re; in addition to Bi.